

WHAT IS CLAIMED IS:

1. A multi-layer tube, comprising;

a base tube made of a fluororubber type thermoplastic elastomer composed of a rubber phase and a crystalline phase, having a hardness of HDA 40 or more and HDA 70 or less as measured according to JIS K 7215; and a coating layer laminated on an inner surface or an outer surface of the base tube,

wherein the coating layer is a blend of the above fluororubber type thermoplastic elastomer with a (vinylidene fluoride)-(hexafluoropropylene)-(tetrafluoroethylene) ternary copolymer having a hardness of HDA 70 or more and HDD 80 or less as measured according to JIS K 7215.

2. A multi-layer tube, comprising;

a base tube made of a fluororubber type thermoplastic elastomer composed of a rubber phase and a crystalline phase; and a coating layer laminated on an inner surface or an outer surface of the base tube, wherein the coating layer is a blend of a fluororubber type thermoplastic elastomer with an ethylene-tetrafluoroethylene copolymer (ETFE) or a poly(vinylidene fluoride) (PVDF).

3. A multi-layer tube, comprising;

a base tube made of a fluororubber type thermoplastic elastomer composed of a rubber phase and a crystalline phase; and a coating layer laminated on an inner surface or an outer surface of the base tube, wherein the coating layer is made of an ethylene-tetrafluoroethylene copolymer (ETFE) or a poly(vinylidene fluoride) (PVDF).

4. A multi-layer tube according to claim 2 or 3,

wherein the base tube has a hardness of HDA 40 or more and HDA 70 or less as measured according to JIS K 7215 and the coating layer has a hardness of HDA 70 or more and HDD 80 or less as measured according to JIS K 7215.

5. A multi-layer tube comprising;

a base tube; and

a coating layer laminated on an inner surface of the base tube,

wherein the both materials of the base tube and the coating layer are made of a blend of a fluororubber type thermoplastic elastomer(A) composed of copolymer of a rubber phase and a crystalline phase having a hardness of HDA 40 or more and HDA 70 or less as measured according to JIS K 7215, with a non-adhesive fluoroplastic (B) having a hardness of HDA 70 or more and HDD 80 or less as measured according to JIS K 7215, and the weight percent of a ternary copolymer(B) of the base tube is less than that of the coating layer.

6. A multi-layer tube, according to any of claim 1 ~ 3, wherein a non-adhesive fluoroplastic is laminated on a side whose surface is not laminated with the coating layer of the base tube.

7. A multi-layer tube, according to any of claim 1 ~ 3, wherein a blend of the fluororubber type thermoplastic elastomer composed of a rubber phase and a crystalline phase having a hardness of HDA 40 or more and HDA 70 or less as measured according to JIS K 7215, with a (vinylidene fluoride)-(hexafluoropropylene)-(tetrafluoroethylene) ternary copolymer having a hardness of HDA 70 or more, HDD 80 or less as measured according to JIS K 7215 is laminated on the side whose surface is not laminated with the coating layer of the base tube.

8. A multi-layer tube, according to claim 1, 2 or 5, wherein the blend contains less than 80 weight percent of the fluororubber type thermoplastic elastomer.

9. A multi-layer tube, according to any of claim 1~8, wherein the rubber phase is composed of the (vinylidene fluoride)-(hexafluoropropylene)-(tetrafluoroethylene) ternary copolymer.

10. A multi-layer tube, according to any of claim 1~9, wherein a thickness of the coating layer is 0.5~70% of the thickness of the base tube.